

WHAT IS CLAIMED IS:

- 1                   1.       A system for transferring multimedia information from a source location  
2 to a destination location through one or more networks, the system comprising:  
3                   a source output providing a first stream of information in one of a plurality of  
4 source;  
5                   a destination input receiving a second stream of information in one of a plurality  
6 of destination capabilities;  
7                   a proxy transcoder server ("PTS") coupled between the source output and the  
8 destination input, the PTS comprising:  
9                   a capability module adapted to identify the source capability of the source  
10 output and adapted to identify destination capability of the destination input;  
11                   a selection module adapted to select a transcoding process based upon the  
12 one capability of the source capabilities and the one capability from the destination  
13 capabilities;  
14                   a transcoding module adapted to use the selected transcoding process to  
15 process the first stream of information.
- 1                   2.       The system of claim 1 wherein the one or more transport networks are  
2 selected from a group comprising the Internet, a mobile network, a wide area network, a local area  
3 network, PTSN, ISDN, and SONET.
- 1                   3.       The system of claim 1 wherein at least one of the source output and the  
2 destination input is that of a remote device.
- 1                   4.       The system of claim 3 wherein the capability module identifies at least one  
2 of the output and input of the remote device, based on information stored in the device, based on  
3 user subscription information stored in a network database of the user's service provider, based  
4 on in-band information command and control within a stream exchanged, or pre-set by the  
5 service provider.

1           5.     The system of claim 1 wherein the transcoding process selected by the  
2 capability module transcodes data from a first bitstream protocol mode to a second bitstream  
3 protocol mode.

1           6.     The system for claim 1 wherein the PTS further comprising a rate control  
2 module regulating the data rate produced by the PTS.

1           7.     The system for claim 6 wherein the rate control module detects network  
2 status information by calculating "round-trip" time information based on network congestion  
3 information, bandwidth information, quality information from a network host or network access  
4 provider, or internal PTS mechanisms.

          8.     The system for claim 7 wherein the "round-trip" time information can be  
measured by send a "ping" packet to either the source location or the destination location.

          9.     The system for claim 6 wherein the rate control module detects the  
network status information by using in-band information.

          10.    The system for claim 6 wherein the rate control module regulates the data  
rate by changing transcoding parameters.

          11.    The system for claim 6 wherein the rate control module regulates the data  
rate by instructing network equipment to give a higher priority to data being handled by the PTS  
than other data.

1           12.    The system of claim 1 wherein the format of the capability is selected  
2 from a group comprising ITU, IETE, and WAP.

1           13.    The system of claim 1 wherein the one or more networks are selected from  
2 a plurality of different networks, each of the network being configured for a particular standard.

1           14.    The system of claim 1 wherein the PTS further comprising a network  
2 addressing module to determine the network address of the source output and the network  
3 address of the destination input.

15. The system of claim 1 wherein the PTS further comprising a media mixing process to combine bitstreams associated with two or more audio streams and retransmit the combined bitstreams to the destination input.

16. The system of claim 1 wherein the PTS further comprising an intellectual property rights management module to manage and process information on intellectual property rights.

17. The system of claim 1 wherein the PTS further comprising a encryption and decryption process to encrypt and decrypt the data.

18. The system for claim 6 wherein the rate control module regulates the data rate dynamically and in real time.

19. The system of claim 1 wherein the transcoding module are programmable to transcode between various types of capabilities for the source output and various types of capabilities for the destination input.

20. A system for transferring multimedia information from source to destination locations through one or more networks, the system comprising:

a source output in a first format from a plurality of source capabilities, the source output being coupled to a first network, the source output providing a first stream of information;

a destination input to be received in a second format from a plurality of destination capabilities, the destination input being coupled to a second network, the destination input receiving a second stream of information;

a proxy transcoder server ("PTS") coupled between the source output and the destination input, the proxy transcoder server comprising:

a capability process coupled to the source output, the capability process being adapted to identify the first format of the source output and adapted to identify the second format of the destination input;

a transcoding process coupled to the capability process, the transcoding process comprising a plurality of transcoding modules numbered 1 through N, where N is an integer greater than 1, the transcoding process being adapted to select one of the transcoding

16 process based upon the first format that is associated with a capability and the second format that  
17 is associated with a second capability; and  
18 a bit rate control process coupled to the transcoding process, the bit rate  
19 control process being adapted to receive a network status information from the first network, the  
20 bit rate control being adapted to adjust a status of the stream of information based upon the  
21 network status information.

1 21. The system of claim 20 wherein the status information comprises a ping.

1 22. The system of claim 20 wherein the status is a stop status.

1 23. The system of claim 20 wherein the status is a prioritization status.

1 24. The system of claim 20 wherein the status is to adjust a bit rate by  
2 selecting a lower bit rate coder.

1 25. A method for processing streams of information, the method comprising:  
2 identifying a source capability from a plurality of source capabilities for a stream  
3 of information;

4 identifying a destination capability from a plurality of destination capabilities;

5 selecting a transcoding process from a plurality of transcoding processes in a  
6 library based upon the identified source capability and the identified destination capability;

7 processing the stream of information using the selected transcoding process if the  
8 identified source capability and the identified destination capability are different;

9 transferring the stream of information from the source to the destination free from  
10 one of the transcoding processes of the identified source capability and the identified destination  
11 capability matches.

1 26. The method of claim 25 wherein the selected transcoding process is  
2 provided by empirical information.

1 27. The method of claim 25 wherein the library is a look up table having at  
2 least the plurality of source capabilities and the plurality of destination capabilities in a second  
3 dimension.